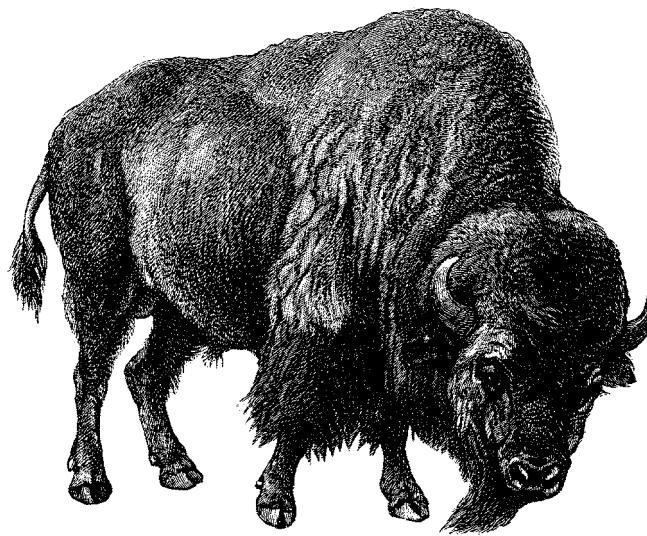


FINAL BISON HUNTING ENVIRONMENTAL ASSESSMENT



SEPTEMBER 30, 2004



***Montana Fish,
Wildlife & Parks***

TABLE OF CONTENTS

CHAPTER 1: PURPOSE AND NEED FOR ACTION	1
Introduction.....	2
Purpose and Need for the Proposed Action.....	2
Benefits of the Proposed Action.....	2
Decisions to Be Made.....	3
Other Agencies that Have Jurisdiction or Responsibility.....	4
Public Involvement Process.....	5
Issues Identified through Public Scoping, the Draft EA, and Public Meetings That Have Been Evaluated in the Final EA	7
Potential impacts of hunting on bison population size/survival	7
Potential impacts of hunting on bison genetics.....	7
Humaneness/ethics of hunting bison.....	8
Legal issues.....	9
Impacts of proposed brucellosis vaccination program on edibility of meat.....	10
Logistics of hunting bison.....	10
Public safety	11
Exposure of hunters to brucellosis.....	12
Property damage (by hunters or by bison during the hunt).....	12
Impacts of bison hunters or activities associated with hunting on other species (including threatened and endangered species)	12
Impacts of a recreational bison hunt on activities mandated under the Interagency Bison Management Plan.....	12
Problems specifically associated with hunting bison near the boundary of Yellowstone National Park.....	13
Economics and social issues not associated with YNP.....	13
Issues Considered but not Evaluated in the Final EA	14
Use of “natural control” rather than human control of the YNP bison population	14
Bison and elk role in brucellosis transmission	14
Impacts of allowing bison hunts on private ownership and sales of bison.....	15
“Citizen’s alternative”.....	15
Issues raised in scoping, comments on the draft EA, or public meetings but determined to be beyond the scope of this EA.....	15
Morality of hunting.....	15
Treatment of Native Americans	16

Tribal hunting rights in and around YNP.....	16
Distribution of bison captured by NPS or MDOL	16
Hazing and capture protocols.....	16
Management of wolves.....	16
Development of a state bison management plan.....	17
The role of corruption in driving bison control efforts near YNP.....	17
Education of ranchers to tolerate bison.....	17
 CHAPTER 2: AFFECTED ENVIRONMENT.....	 18
Introduction.....	18
History and Status of Bison in the Greater Yellowstone Ecosystem.....	18
A Review of Bison Hunting in the Yellowstone Park Area.....	18
Bison Population Status and Distribution	23
Bison Ecology in the Yellowstone Ecosystem.....	28
Determining optimal bison population size.....	35
Social and Cultural Environment.....	36
Economic Environment.....	37
Threatened and Endangered Species.....	39
Impacts on Vegetation.....	40
Impacts on Physical Environment.....	41
 CHAPTER 3: ALTERNATIVES INCLUDING THE PREFERRED ALTERNATIVE	 42
Introduction.....	42
Considerations and restrictions common to all alternatives that include hunting...	42
Alternatives Considered but not Selected for Analysis.....	44
Unlimited permits issued via over-the-counter purchase.....	44
Limited permits available on a first-come first-serve basis.....	45
Preference systems for Native Americans.....	45
Permits reserved for primitive weapons.....	45
Early fall hunting.....	45
Late winter/spring hunting.....	45

Descriptions of Alternatives Selected for Analysis.....	46
Alternative 1. No action.....	46
Implementation.....	46
How does this alternative address major issues?.....	46
<i>Impacts on population size/distribution.</i>	46
<i>Impacts on population genetics</i>	46
<i>Humaneness/ethics</i>	47
<i>Legality</i>	47
<i>Impacts of proposed brucellosis vaccination program on edibility of meat...</i>	47
<i>Logistics of hunting bison</i>	47
<i>Public safety</i>	47
<i>Risk of transmitting brucellosis to hunters</i>	47
<i>Property damage</i>	47
<i>Impacts of bison hunting on other animal species</i>	47
<i>Impacts of a recreational bison hunt on activities mandated under the</i> <i>Interagency Bison Management Plan</i>	47
<i>Problems specifically associated with hunting bison near the boundary of</i> <i>Yellowstone National Park</i>	48
<i>Economics and social issues not associated with YNP</i>	48
Alternative 2. Bison hunting by permit only in a late fall/early winter (November 15 – February 15) season limited to areas where bison are allowed to remain outside YNP during seasons when contact with cattle is unlikely without triggering action (hazing, capture, or shooting) by agencies charged with managing bison.....	48
Implementation.....	49
How does this alternative address major issues?.....	49
<i>Impacts on population size/distribution.</i>	49
<i>Impacts on population genetics</i>	49
<i>Humaneness/ethics</i>	50
<i>Legality</i>	50
<i>Impacts of proposed brucellosis vaccination program on edibility of meat...</i>	50
<i>Logistics of hunting bison</i>	51
<i>Public safety</i>	51
<i>Risk of transmitting brucellosis to hunters</i>	51
<i>Property damage</i>	52
<i>Impacts of bison hunting on other animal species</i>	52
<i>Impacts of a recreational bison hunt on activities mandated under the</i> <i>Interagency Bison Management Plan</i>	52
<i>Problems specifically associated with hunting bison near the boundary of</i> <i>Yellowstone National Park</i>	52
<i>Economics and social issues not associated with YNP</i>	53

Alternative 3. Late fall – early winter season (November 15 – February 15), limited entry hunt with permits valid for the entire season, and hunting open in areas in which bison presence does not trigger agency management actions and Zone 3 areas where bison presence is not tolerated (see Alternative 2 for details of zone designation).....	53
Implementation.....	53
How does this alternative address major issues?.....	54
<i>Impacts on population size/distribution.</i>	54
<i>Impacts on population genetics</i>	54
<i>Humaneness/ethics</i>	55
<i>Legality</i>	55
<i>Impacts of proposed brucellosis vaccination program on edibility of meat...</i>	55
<i>Logistics of hunting bison</i>	55
<i>Public safety</i>	56
<i>Risk of transmitting brucellosis to hunters</i>	56
<i>Property damage</i>	57
<i>Impacts of bison hunting on other animal species</i>	57
<i>Impacts of a recreational bison hunt on activities mandated under the</i> <i>Interagency Bison Management Plan</i>	57
<i>Problems specifically associated with hunting bison near the boundary of</i> <i>Yellowstone National Park</i>	57
<i>Economics and social issues not associated with YNP</i>	58
Alternative 4. Late fall – early winter season (November 15 – February 15) for a limited entry hunt with permits valid for 10-day intervals.....	58
Implementation.....	58
How does this alternative address major issues?.....	59
<i>Impacts on population size/distribution.</i>	59
<i>Impacts on population genetics</i>	59
<i>Humaneness/ethics</i>	60
<i>Legality</i>	60
<i>Impacts of proposed brucellosis vaccination program on edibility of meat...</i>	60
<i>Logistics of hunting bison</i>	61
<i>Public safety</i>	61
<i>Risk of transmitting brucellosis to hunters</i>	62
<i>Property damage</i>	62
<i>Impacts of bison hunting on other animal species</i>	62
<i>Impacts of a recreational bison hunt on activities mandated under the</i> <i>Interagency Bison Management Plan</i>	62
<i>Problems specifically associated with hunting bison near the boundary of</i> <i>Yellowstone National Park</i>	63
<i>Economics and social issues not associated with YNP</i>	63

CHAPTER 4: CONSEQUENCES OF ALTERNATIVES INCLUDING THE PREFERRED ALTERNATIVE.....	64
Introduction.....	64
Methods.....	64
Alternative 1: No Action.....	64
Biological and Physical Environment	64
Cultural/Social Environment.....	65
Economic Impacts.....	65
Legal and Economic Impacts for MFWP.....	66
Overall impacts (short, medium, long term, and cumulative effects).....	66
Mitigation needed.....	68
Irretrievable commitments.....	68
Alternative 2: Bison hunting by permit only in a late fall/early winter (November 15 to February 15) season limited to areas where bison are allowed to remain outside YNP during seasons when contact with cattle is unlikely without triggering action (hazing, capture, or shooting) by agencies charged with managing bison.....	68
Biological and Physical Environment	68
Cultural/Social Environment.....	69
Economic Impacts.....	69
Legal and Economic Impacts for MFWP.....	70
Overall impacts (short, medium, long term, and cumulative effects).....	71
Mitigation needed.....	73
Irretrievable commitments.....	73
Alternative 3: (Preferred Alternative) Late fall – early winter season (November 15 – February 15), limited entry hunt with permits valid for the entire season, and hunting open in areas in which bison presence does not trigger agency management actions and Zone 3 areas where bison presence is not tolerated.....	73
Biological and Physical Environment	73
Cultural/Social Environment.....	74
Economic Impacts.....	75
Legal and Economic Impacts for MFWP.....	75
Overall impacts (short, medium, long term, and cumulative effects).....	76
Mitigation needed.....	78
Irretrievable commitments.....	78

Alternative 4: Late fall – early winter season (November 15 – February 15)	
for a limited entry hunt with permits valid for 10-day intervals.....	79
Biological and Physical Environment	79
Cultural/Social Environment.....	80
Economic Impacts.....	80
Legal and Economic Impacts for MFWP.....	81
Overall impacts (short, medium, long term, and cumulative effects).....	81
Mitigation needed.....	84
Irretrievable commitments.....	84
PREPARATION OF ENVIRONMENTAL ASSESSMENT.....	85
LITERATURE CITED.....	85
APPENDICES.....	90
Appendix A: Kuntz. 2004. Bison hunts in North America.....	90

LIST OF TABLES

Table 1. Outline of steps leading to a decision on a public hunt for bison in Montana and implementation of the hunt if the decision by MFWP and MDOL is favorable.....	6
Table 2. Bison counts and removals from the Yellowstone herd, winters 1901-02 to 2003-2004 (based on an expansion of Table 17, p. 285, in National Park Service 2000 with recent data provided by R. Wallen, Yellowstone National Park).....	21
Table 3. Potential areas available for public hunting of bison near the Yellowstone National Park boundary in Montana.....	27
Table 4. Winter severity indices (LNR = Lower Northern Range, UNR = Upper Northern Range, HP = Hayden – Pelican Valley, Mean SI = average of previous 3 indices), bison counts, and numbers of bison removed by humans (public hunting, agency shooting, and capture and shipping) for YNP bison, 1981-82 to 2003-04.....	29
Table 5. Emigration of bison from Yellowstone National Park and mean numbers of bison removed from the population by human action (hunters, capture/slaughter, agency shooting) for three population ranges, 1966 – 2003.....	30
Table 6. Pearson correlations between population size and winter severity and bison removed from the population by human action for the winters of 1966 – 1967 through 2002-2003.	34
Table 7. Alternatives analyzed in this Environmental Assessment.....	44

LIST OF FIGURES

Figure 1. Map of the area considered in this EA showing areas where bison are tolerated and not tolerated.....	24
Figure 2. Summary of MDOL reports on bison leaving YNP (or near boundary) along the western boundary 1999-2004.....	31
Figure 3. Summary of YNP reports on bison in the northern boundary area 1999-2004.....	32